

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method of driving the gate of an NFET to create a high side switch within a circuit having a charge pump circuit, a first transistor, a second transistor, a third transistor with a base, the first and third transistors having threshold currents, and each transistor electrically connected to an input signal, and a first and second resistor electrically connected to the transistors; comprising:
driving the charge pump circuit to create a local positive voltage within the circuit;
deactivating the first and second transistor by providing a input signal below the threshold current of the first transistor; and
pulling the base of the third transistor high via the first and second resistor to drive current from the local positive voltage into the gate of the NFET.
2. (original) The method of claim 1 wherein the charge pump is driven by an oscillator.
3. (original) The method of claim 1 wherein the circuit has a diode electrically associated with the local positive voltage.
4. (currently amended) The method of claim 3 wherein the first diode holds the local positive voltage up when the input signal is high.

5. (original) The method of claim 1 wherein the circuit has a logic supply voltage used to supply extra voltage to the local positive voltage.

6. (currently amended) An electrical circuit having an input signal for driving the gate of an NFET with a base to create a high side switch comprising:

a source voltage passageway adapted to receive the input signal and electrically connected to the NFET;

a local positive voltage passageway electrically connected to the NFET; and

a power source electrically connected to the NFET providing a positive voltage source to the NFET; and

a diode electrically connected between the source voltage

passageway and the local positive voltage passageway to clamp the local voltage passageway with respect to the source voltage passageway.

7. (original) The electrical circuit of claim 6 wherein the source voltage passageway consists of a first transistor having a threshold voltage and adapted to receive the input signal; and a second transistor electrically connected to the first transistor such that when the threshold voltage of the first transistor is not supplied it will deactivate; said second transistor being electrically connected to the base of the NFET.

8. (original) The electrical circuit of claim 7 wherein the local positive voltage passageway consists of a charge pump circuit having a first and second diode in parallel relation with a capacitor and adapted to create a local positive voltage; a third diode in parallel relation to the capacitor; a second

resistor electrically connected to the charge pump circuit; and a third transistor electrically connected to the charge circuit such that the second and third resistors drive current into the gate of the NFET when the threshold voltage of the first transistor is not supplied.

9. (original) The electrical circuit of claim 8 further comprising a logic supply voltage operably connected to a fourth diode that is electrically connected to the charge pump circuit and adapted to hold the local positive voltage up when pulling current out of the second resistor.

10. (original) The electrical circuit of claim 8 wherein the charge pump circuit is driven by a oscillator.

11. (original) The electrical circuit of claim 8 wherein the NFET continuously switches.

12. (original) A method of driving a coil of an electrohydraulic valve with a circuit having a charge pump circuit, a first transistor, a second transistor, a third transistor with a base, the first and third transistors having threshold currents, and each transistor electrically connected to an input signal, and a first and second resistor electrically connected to the transistors; comprising:

driving the charge pump circuit to create a local positive voltage within the circuit;
deactivating the first and second transistor by providing a input signal below the threshold current of the first transistor; and

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pulling the base of the third transistor high via the first and second resistor to drive current from the local positive voltage into a gate of a NFET thus driving the coil of the electrohydraulic valve.